CHAPTER FIVE

MARKET POTENTIAL

Previous chapters of this statewide air service analysis for Arizona have provided a wealth of background information on the airline industry in general and on air service in Arizona's smaller communities in particular. Based on results from surveys of passengers and travel agents and from input from businesses and communities throughout the State, the previous chapter of this report provided insight into the market or service areas that each of Arizona's commercial service airports are presently attracting passengers from. Estimating each airport's service area is an important step in the study because it is one of the building blocks for estimating the total level of air travel demand that is actually associated with each of the study airports. Having an estimate of each airport's unconstrained demand for commercial air travel is essential to determining each airport's ability to support new or improved commercial airline service.

There is no doubt that commercial airline service is important to Arizona, not just because of the transportation function that it provides, but also because commercial airline service is an important underpinning to the State's economy. This chapter of the Arizona Air Service Study provides information that highlights the economic importance of scheduled airline service, and it recounts examples of initiatives that have been taken by other communities to attract and improve scheduled commercial airline service. In addition, this chapter provides information that initiates the process to develop estimates of unconstrained air travel demand that are associated with each of the study airports.

1. THE ECONOMIC SIGNIFICANCE OF COMMERCIAL AIRLINE SERVICE

In today's global economy, the significance of commercial airline service is widely recognized as an important transportation resource. But commercial aviation's importance extends beyond its role as a safe and efficient means of transportation. Commercial service airports contribute in several ways to local, regional, and the statewide economies. Airports themselves are notable centers for employment. There are usually a number of businesses located on a commercial airport that have varying numbers of on-site employees. These businesses include the airlines themselves, restaurants, gift and news shops, lounges, rental car companies, security, parking concessionaires, taxi operators, and others. The airports themselves typically employ staff for items such as administration and maintenance. There are also often government agencies such as the FAA or the National Weather Service that have on-site employment at a commercial service airport.

In addition to airport-related businesses and employees, commercial airports also make significant economic contributions via the visitors that they bring to the State. Each year, hundreds of thousands of visitors arrive in Arizona via the commercial service airports. These visitors come to Arizona for a variety of pleasure, personal, and business-related reasons. Once in the State, these visitors spend billions of dollars on an annual basis. While in Arizona, visitors spend money for hotels/motels, on

food and beverages, for entertainment, for recreational activities, for shopping, for transportation, and for many other items. This visitor related spending that can be traced to the State's commercial airports provides a significant economic contribution.

Finally, commercial airports throughout Arizona contribute to the efficiency of non-aviation businesses. There are many businesses who rely on access to commercial aviation to support their day-to-day activities. These businesses may have employees who travel on a weekly basis, or they many have customers or suppliers who reach them via Arizona's commercial airports. Many employers in the State receive a "value-added" economic benefit from the efficiency that they gain through their use of commercial airports.

Arizona's commercial airports make significant economic contributions through on-airport businesses/tenants, through visitors arriving via the airports, and through the value-added benefits that employers around the State gain from their use of commercial airports. Economic benefits that flow from these three sources are typically measured using three indicators: employment, payroll, and annual economic activity (output). As the initial benefits that are associated with Arizona's commercial airports are released into the economy, these benefits re-circulate or multiply. For example, when an employee at an airport is paid, they take their pay check and spend it for various items in the community, groceries for instance. The expenditures by the airport employee at the local grocery store helps to support employment, payroll, and the grocery store's purchase of goods and services. An input-output model is typically used to trace the flow of initial expenditures, payroll, and employment as benefits multiply through the economic cycle.

In conjunction with the Arizona State University College of Business's ASU MBA Program, the Arizona Department of Transportation is in the process of completing a study that quantifies the economic benefits of all facets of aviation to the State. According to this study which is based on 1997-1998 data for Arizona's commercial service airports, the commercial airports themselves are responsible for employing 29,432 persons. These airport tenant related jobs have an annual payroll that is estimated at $884.1 million. Annual economic activity associated with the commercial airports in Arizona is estimated at $3.6 billion. As these benefits enter the economy, they multiply, creating successive waves of additional benefits in each of the measurement categories. When the multiplier impact is added to the previously noted benefits, the following total economic benefits are found to be associated with businesses on Arizona's commercial service airports, according to the ASU study: employment - 75,081; payroll - $1.8 billion; and annual economic activity - $5.6 billion.

In addition to these benefits that stem from businesses located on Arizona's commercial service airports, spending by visitors who come into the State via commercial airlines helps to support additional economic benefits. As previously noted, visitors fly into Arizona via the commercial airlines for a wide variety of reasons. Once in the State, these visitors spend money on many items. This visitor related spending helps to support additional jobs and associated payroll throughout Arizona. Similar to the discussion on airport tenant-related benefits, initial benefits (jobs, payroll, and economic activity) that are associated with commercial service visitors multiply within the local, regional, and statewide economies. Annually, visitors who arrive in Arizona via the commercial

service airports, according to the ASU study, are estimated to be spending $4.5 billion. This visitor related spending helps to support an estimated 77,153 jobs that have an annual payroll of approximately $1.2 billion. As these visitor related impacts re-circulate and multiply once they enter the economic cycle, additional economic activity is created. When this multiplier effect is considered, total spending related to visitors arriving via Arizona's commercial airports increases to an estimate $9 billion. This $9 billion in annual economic activity supports a total of 185,167 jobs, and these jobs have a annually payroll of approximately $3 billion.

When economic impacts related to on-airport businesses and visitors are combined, an estimated 260,250 jobs statewide are linked to the commercial airports. These jobs have an annual payroll that exceeds $4.8 billion. Total annual economic activity linked to tenants at and visitors to Arizona's commercial service airports is estimated to exceed $14.6 billion.

While the ASU study did not estimate value-added benefits that businesses throughout Arizona gain from their use of the commercial airport system, prior economic impact studies show that approximately 12 percent of a state's employment in the manufacturing, retail, wholesale, finance, real estate, insurance, utility, communications, and transportation industries is tied to commercial aviation. Statewide economic impact studies for Oregon, Idaho, Maine, Virginia, and Pennsylvania verify this value-added relationship between the commercial airports and statewide employment.

Economic impact estimates from the ASU study indicate that, roughly speaking, for every 70 enplanements that a commercial service airport has, one job is created. This job could be linked to the activities of an on-airport business, or it could be linked to spending that takes place related to visitors to Arizona who arrive in the State via the commercial airports. The ASU study indicates that the average annual salary for each job that is created by the State's commercial service airports is approximately $18,450.00. For the 1997-1998 study period, Arizona's annual commercial airline enplanements, roughly 18.1 million, created $14.6 billion in total economic activity related to both airport tenants and commercial service visitors. This indicates that for each person that boards a commercial aircraft in Arizona, over $800 in annual economic activity results.

Currently, over 95 percent of Arizona's commercial airline enplanements are served at Phoenix and Tucson. As noted in the previous chapter, the study airports experience the erosion of their base of passenger demand to these two larger Arizona commercial airports, as well as to Las Vegas. Clearly, from an economic standpoint, there is a significant incentive for the study airports to increase their capture rate of the unconstrained commercial air travel demand levels that are associated with each of their service areas. In order to increase the number of enplanements that they serve, it is likely that the study airports will need to have improved commercial airline service. The following section details some of the actions that have been taken in other communities around the U.S. in to improve commercial airline service.

2. COMMUNITY INITIATIVES TO IMPROVE COMMERCIAL AIRLINE SERVICE

Each of the airports identified in the Arizona Air Service Study has an unconstrained level of demand for commercial air travel that is associated with the market area it serves. (This level of unconstrained demand will be determined in a subsequent chapter of the study.) The level of commercial air service within a given area is influenced by a number of factors; to some extent, the service provided determined the airport's ability to capture some portion of its unconstrained level of demand. Adequate and effective commercial air service is not just a transportation issue in the State, it is also an economic issue. Civic, political, and business leaders throughout the State are concerned about the economic viability of their respective markets related to the type and level of commercial air service that is available.

The type and level of commercial air service provided to Arizona communities varies based on specific characteristics for each community. As previously noted, three communities in the State are included in the Federal Essential Air Service (EAS) Program. The EAS program provides Federally subsidized air service to certain communities that qualify for this program. The program outlines the parameters for funding eligibility, including distance from a small hub airport and the maximum per passenger subsidy that the program will pay. Qualified communities then let bids for service. A carrier is then selected from the list of qualified bidders to provide the service and receive the subsidy. Markets served through the EAS program are guaranteed a minimum level of air service.

The comparable market analysis presented later in this chapter outlines the varying levels of service that are provided to communities in the West that are similar in size to communities in Arizona served by study airports. The analysis showed that even among communities of similar size, to a large extent, the level of commercial air service is not consistent. Analysis also showed that the number of enplanements captured in each market is not always comparable. Therefore, it is important to analyze the specific air service needs of the community and determine what level of service is viable on a market-by-market basis.

While the air service needs of a community will be determined independently, actions used by other communities can be considered to address air service concerns throughout Arizona. As part of this study, recommendations will be made related to service opportunities that appear viable, from the carrier's standpoint. In some cases, it is possible that certain Arizona markets may lack the ability to support new or improved economically viable, self-supporting service. As outlined in this chapter, given the significant economic benefits that a community can derive from commercial airline service, some communities may wish to consider some form of subsidy, guarantee, or partnership to attract or sustain commercial airline service to their community, if new or improved service options appear non-existent or limited.

A review of programs used by other states and specific communities to address air service was conducted. The primary purpose of the review is to provide information on alternatives for markets

in Arizona to improve their airline service. This review is indicative of some of the actions taken in an effort to improve commercial airline service throughout the U.S.

A. Statewide Efforts

In recent years, many state departments of transportation and aeronautics agencies have undertaken air service analyses. These analyses have ranged from addressing intrastate commercial airline service to preparing marketing packages on the behalf of airports within the states. In conducting this study, Arizona joins states such as Virginia, Pennsylvania, Michigan, Georgia, Colorado, Mississippi, Minnesota, North Dakota, Nebraska, and Montana that have recently prepared studies to provide guidance on air service issues.

In addition to analyzing air service needs, some states have other programs that they have initiated related to air service. These programs are summarized in the following sections.

1. South Dakota

South Dakota conducted an air service study in the late 1980s. This study analyzed both intrastate and interstate air service issues. To address the intrastate air service needs, the State set out to maintain an airline to serve these needs. Based on results from the air service study, intrastate routes were developed. The State contracted with GP Express, a regional carrier, to provide the service, while the State actually ran the airline. The service was linear in nature, connecting many smaller cities throughout the State. After six months, the service was canceled due to significant financial losses and limited ridership.

2. North Dakota

Through a program with the University of North Dakota's Aerospace Foundation (UNDAF), the State helped to support additional airline service to many communities throughout North Dakota. UNDAF operated the Advanced Spectrum Program, a training program for China Air pilots, wherein a training pilot worked as the first officer on a Beech 1900 for Great Lakes Aviation/United Express. As part of this program, China Air actually paid a subsidy to Great Lakes for the pilot training. This subsidy helped to pay airline costs so Great Lakes could provide additional service to a new hub (Denver) from many of the North Dakota communities. The program lasted approximately two years. The demise of the program can be traced to problems with pilot graduation and lags in new class starts.

North Dakota Aeronautics Commission also worked on the behalf of its communities to market new airline service to Frontier and American. The Commission has acted as a liaison between carriers and the communities, involving chambers of commerce and local businesses to determine levels of interest and to provide seat guarantees to the carriers operating in North Dakota.

3. Minnesota

The Minnesota Department of Transportation, Office of Aeronautics has an active program in which they address air service throughout the State. Currently, the Office of Aeronautics is working with 11 Minnesota cities to develop a campaign for local air service promotion. Funding for this campaign was appropriated in 1997 by the Minnesota State Legislature. The funding is dedicated to help the State and the communities develop a multi-media campaign to promote local air service in Minnesota. The primary purpose of the State program is to encourage air travelers to use their local Minnesota airport for their air travel needs. The State program is being run in conjunction with a Fly Local Promotion initiated by Northwest Airlines. Northwest's promotion establishes specific "add on" fares for Minnesota cities served by Northwest Airlink. These fares allow passengers from Minnesota spoke airports to fly to Minneapolis and connect to their final destination for a small additional charge when compared to the nonstop fare that would be available if the traveler began their trip from Minneapolis. As part of the promotion, the Minnesota communities have been actively promoting their local airports through advertising campaigns. Through the State Legislative program, cities can apply for air service promotion grants. In addition to these individual grants, the State has implemented *Easy Goin'-Fly Your Local Airport-It's Just Plane Easier*, a program that can be used by the local communities to promote flying from the local airport. This program has TV, radio, and newsprint ads and a brochure that can be used to promote the local airport. The program has generic material that can be used to create community-specific marketing data. Although this program was somewhat recently initiated, it appears to be successful as the airports have reported increased enplanements.

4. Michigan

Michigan's Aviation Services Division of the Michigan Department of Transportation, Bureau of Aeronautics also offers grants to air carrier airports for carrier retention and recruitment. These grants can be used to market new airline service or for promotion of the local airport's airline service.

5. Maine

The Maine Department of Transportation, Air Transportation Division conducted an intrastate and interstate air service study. The intrastate air service study examined the needs of small communities throughout Maine to be linked to the national air transportation system. Although the State has not acted directly to fund an intrastate system, the recommendations from the State study were used as the basis for an instate carrier, Pine State Airlines, to develop its instate routing. This routing links the most northern cities in Maine, Frenchville and Presque Isle, with the capital, Augusta, and then Portland, the major business center of the State.

On behalf of Portland and Bangor, the Maine Air Transportation Division funded the development of a marketing package for the two airports to approach Delta Air Lines regarding non-stop Atlanta service. The Division acted as a liaison between the communities, the consultant, and the airlines to develop the marketing package.

B. Airport-specific Efforts

There are also examples of communities around the U.S. that have taken steps to improve their air service. These actions are discussed in the following sections.

1. Aspen, Eagle County, Steamboat Springs, Montrose, and Durango, Colorado

These Colorado airports serve as gateways to major winter skiing resort areas. As such, access via air transportation is vital to the corporations who manage and own the resorts. The ski corporations for these resort areas have historically used various forms of revenue or seat guarantees to attract carriers to provide seasonal service to the local airport. These guarantees provide the carrier with a known profit on specific routes during the winter season and ensure that the ski corporations can sell tour packages including air service to enhance their own profitability. In some instances, the guarantees have not been needed due to the high level of demand for the airline service. In other cases, such as poor weather conditions for skiing or other events, the guarantees must be paid to the airline because the level of demand has not met the minimum needed for the airline to obtain its identified profit level.

2. Newport News, Virginia

The community of Newport News is located across the bay from Norfolk. The two communities are served by commercial carriers and have historically enjoyed varying levels of commercial airline service. In order to improve its commercial airline service, however, Newport News formed a panel of local businesses. This coalition decided that a major goal was to attract a low-fare carrier to the Newport News area. The "Blue Ribbon Panel" annually contributes to a fund to guarantee service from AirTran (formerly ValuJet). The airport does not contribute to the fund and does not participate in the actual backing of the airline, however, the community notes that it has truly benefitted from the service provided by the low-fare carrier. Newport News has consistently had overall lower average fares than its competitors; these lower fares are attributed to the presence of the low-fare carrier.

3. Gulfport, Mississippi

Located along the shores of the Gulf of Mexico, the Gulfport-Biloxi region serves as a newly founded gaming resort area. Since the advent of gaming outside Nevada, various regions throughout the U.S. have developed casinos to attract tourists. Gulfport-Biloxi has been successful in developing a large gaming complex with nearly 10,000 hotel rooms to support

this activity. To further complement the gaming industry, Gulfport solicited ValuJet/AirTran to provide low-fare service to the region. Similar to Newport News, local businesses contributed to a fund to support service by a low-fare carrier. After more than three years serving the market, AirTran terminated its service to Gulfport, even though it had been receiving an operating subsidy from the community. The airline claimed that, even with the subsidy, the level of demand being served in the market was not sufficient to maintain service.

C. Summary

As demonstrated by the programs discussed in this section, partnerships between airlines and communities and/or state agencies related to commercial air service may be important to an ongoing process to maintain and improve local air service. Many communities have an air service task force who meets regularly to monitor air service both locally and nationally. This type of grass roots effort is considered a vital part of any successful air service program. Although a state agency can be successful in assisting local communities in identifying air service opportunities, a state agency is not in a position to lobby carriers to provide new service to selected communities due to the level of competition that exists between communities for new service.

While subsidizing commercial air service is an option for communities to ensure their continued access to air transportation, there are also other alternative methods available for communities to work with airlines to ensure their success. A subsequent element of this study will examine the financial feasibility of providing new or improved commercial air service to Arizona communities. This element will address the need for an operating subsidy to make service profitable for a carrier. As warranted, subsidies will be identified on an individual market basis to compare the level of funding that would be required versus the potential benefits of commercial airline service in the local community.

3. COMPARABLE MARKET ANALYSIS

The previous sections of this chapter have highlighted the economic importance of commercial aviation. It is because of this recognized importance that many communities throughout the U.S. have taken pro-active steps to attract, sustain, and improve their commercial airline service. The final portion of this chapter provides measures for determining the adequacy of Arizona's existing commercial airline service, and it provides a basis for beginning the process to identify each market area's unconstrained level of demand for commercial airline travel. As has been established by this study, air travelers, both residents and visitors alike, often leave the market area of one airport to drive to a more distant, competing airport to begin their commercial airline travel. In order to adequately assess each study airport's ability to support new or improved commercial airline service, it is important to understand how many current air travelers are actually associated with each of the markets. This estimate represents each study airport's "unconstrained" demand for commercial

airline travel, and it reflects the passengers who currently enplane at the local airport as well as those who leave the local market area to begin their commercial airline travel from a more distant airport.

For each community to establish realistic goals related to commercial airline service, it is sometimes useful to have a measuring stick for setting these goals. One such measure can be a comparison of each community's commercial airline service with the service that is available in other similar communities. As will be discussed, while it is very difficult to compare scheduled airline service between markets, having at least some type of comparative data helps the airport and the community to understand whether or not their current airline service is in line with the service that is available in other similar markets.

A. Factors Influencing Demand

Each community in Arizona generates some level of demand for commercial airline service. Demand for air travel within a given market area is influenced by a number of factors. Factors such as total population, employment, tourism, and income all affect a market's ability to generate demand for airline service. Often, higher levels of population, employment, tourism, and income result higher demand for airline service. Market characteristics for each of the communities being examined in this study were reviewed to provide a basis for understanding the characteristics associated with markets that currently have scheduled commercial airline service versus the potential markets that do not presently have service.

Information was obtained from the Arizona Department of Commerce on each of the communities addressed in this study. For this analysis, three factors were derived from the community profiles compiled by the Department of Commerce:

- Population
- Civilian labor force
- Taxable sales

The most recent data on these factors were available for 1996. **Table 5-1** summarizes the data for these three factors for each of the communities in this study. As shown, in terms of population, Yuma had the highest level of population, followed by Flagstaff and Sierra Vista. Page and Show Low had the lowest levels of population in 1996. For this table, only the population of the community primarily associated with the airport was reported.

As expected, the civilian labor force was also highest in Yuma and Flagstaff, while Show Low and Safford had the lowest levels of civilian labor force among the study airport communities. Unexpectedly, Yuma and Prescott had the highest level of taxable sales in 1996, compared to the lower levels found in Sedona and Flagstaff. It is likely that Flagstaff's taxable sales were lower than many other communities because of the significant presence

TABLE 5-1

Arizona Department of Transportation
Arizona Air Service Study

SOCIOECONOMIC AND DEMOGRAPHIC FACTORS FOR STUDY COMMUNITIES

City	1996 Population	1996 Civilian Labor Force 3/	1996 Taxable Sales 3/	1997 Enplanements 4/
Bullhead City	27,370	16,401	285,121,600	64,094
Flagstaff	55,885	31,023	802,310	47,058
Grand Canyon 2/	2,230	1,591	118,025,507	632,971
Kingman	32,418	15,710	299,863,750	1,559
Lake Havasu City	37,580	17,029	393,095,050	10,668
Page	8,205	4,098	157,535,400	25,623
Prescott	31,275	15,342	545,091,826	10,043
Safford 1/	9,095	3,628	134,605,800	n/a
Sedona 1/	9,235	4,477	280,586	n/a
Show Low	7,230	2,438	191,449,850	n/a
Sierra Vista	38,310	14,794	395,292,200	12,014
Winslow 1/	10,805	4,123	111,348,450	n/a
Yuma	62,487	68,850	843,810,820	75,165

Note: n/a=not applicable (study airports serving these communities did not have scheduled service in 1997)
1/ Potential Market
2/ Grand Canyon includes Grand Canyon Village and Tusayan
3/ Arizona Department of Economic Security

of spending by higher education (Northern Arizona University) which does not generate taxable sales. In many markets that have scheduled commercial airline service, there is a correlation between total population and/or employment and the demand for commercial airline service. A review of the information previously provided in Table 5-1, however, shows that for the study airports there does not appear to be any consistent correlation between either population or employment and the number of enplaning commercial airline passengers that each of the study airports is attracting. This finding helps to underscore the uniqueness of the Arizona commercial air service environment. For example, while employment and population in Flagstaff are roughly double for these same socioeconomic indicators in Bullhead City, enplaned passengers in Bullhead City exceed those for Flagstaff.

Tourism, employment, and population definitely contribute to the demand for commercial airline service in each of the Arizona markets. For the study airports, however, there are several factors that impact the correlation between socioeconomic and demographic indicators and the demand for commercial airline travel. To begin with and as discussed in the previous chapter, many of study airports have overlapping service areas. The service areas of the study airports overlap not only with one another but also with service areas for larger commercial service airports both within and beyond the State. Demand for commercial airline travel in Arizona is also influenced significantly by tourism. With over 600,000 enplanements, the demand for airline travel to and from the Grand Canyon is clearly driven by tourism as opposed to either population or employment. Reviewing the data in Table 5-1, the same conclusion could be drawn for Bullhead City. Enplanements for this market exceed those that might typically be expected based on population and employment levels because of the attraction of the area's gaming industry.

In markets that are not subject to intense competition or significant tourist based travel, total enplanements can have closer correlation with either total employment or total population. Table 5-1 reflects such a correlation in the Yuma market. For the Yuma market, total annual enplanements exceed slightly both employment and population. This discussion helps to underscore the difficulty of comparing levels of commercial airline service because the service that is provided by the carriers that serve each market can be driven by a number of separate, but interrelated factors. Nevertheless, it is useful to identify ranges of service levels that exist in comparable markets to help Arizona communities gage the adequacy of their existing service and to set reasonable expectations related to possible service improvements.

B. Comparison to Other Markets

The type of commercial airline service provided in the various Arizona communities served by study airports was also reviewed to show differences in market characteristics. To provide a more comprehensive review of how airline service relates to market characteristics, markets in Arizona were then compared to markets outside the State.

Using data from the U.S. Census Bureau, population levels in six western states were reviewed to identify market areas that were comparable to those being studied in Arizona. The six states that were examined included New Mexico, Colorado, Texas, Montana, Wyoming, and Nebraska. Between seven and 16 cities were examined in each state to identify population levels for comparative purposes. The 12 (nine existing and three potential, minus the Grand Canyon) Arizona markets were then categorized and cities with similar population levels from the six western states were selected for comparison. It is difficult to consider Grand Canyon in this comparison. The population of the Grand Canyon is estimated at 2,500; the majority of these residents work at the Grand Canyon National Park. The level of commercial air service demand served at the Grand Canyon National Park is primarily tourist-related and consists of day-trips which originate in Las Vegas. While some local residents use the airport, the vast majority are visitors. As a result, there is very limited correlation between socioeconomic and demographic factors for the Grand Canyon market and its level of airline service. Because of the uniqueness of the Grand Canyon market, factors which can be analyzed for other markets are not readily transferable to this market. Methods for estimating demand for scheduled commercial airline service for the Grand Canyon will accordingly be approached differently. The population ranges for the current time frame and the comparable cities that fall within the ranges are as follows:

Large Communities (50,000 -65,000)
Yuma (63,150) and Flagstaff (55,885)

Roswell, NM	47,559
Santa Fe, NM	66,522
Harlingen, TX	56,893
Victoria, TX	61,059
Cheyenne, WY	53,729
Casper, WY	48,800

Intermediate Communities (25,000 - 40,000)
Sierra Vista (38,310), Lake Havasu (37,580), Kingman(32,418), Prescott(31,275), and Bullhead City (27,370)

Carlsbad, NM	26,535
Alamogordo, NM	29,036
Farmington, NM	37,936
Grand Junction, CO	40,851
Helena, MT	27,982
Grand Island, NE	41,177
Laramie, WY	26,583
Kearney, NE	27,314

Small Communities (2,000 - 12,000)
Grand Canyon (2,230), Show Low (7,230), Page (8,436), Safford (9,095), Sedona (9,235), and Winslow (10,805)

Cortez, CO	8,191
Alamosa, CO	8,548
Montrose, CO	11,903
Miles City, MT	8,882
Havre, MT	10,232
Alliance, NE	9,702
Cody, WY	8,721
Riverton, WY	10,050

For this comparison, the following items were reviewed for each community:

Enplanements
Number of carriers providing service
Number of nonstop destinations
Number of scheduled weekly commercial operations
Number of scheduled weekly airline seats

These items are depicted, by range of population, in **Table 5-2**. The following sections discuss the comparative analysis for each of the population ranges, by air service item.

1. Large Communities

Enplanement statistics for the airports were reviewed to provide a comparison of the level of demand that is being captured by the airports with existing scheduled commercial airline service. Enplanements for the Arizona airports were provided by the Arizona Department of Transportation, while enplanement statistics for the out-of-state airports were obtained from the Federal Aviation Administration's (FAA's) WinTAF program. The WinTAF program is an electronic Windows version of the Terminal Area Forecast (TAF) which is prepared annually by the FAA. The database for this program contains information on enplanements and operations, both historical and projected. The most current version of WinTAF contains 1996 actual FAA data and estimates for 1997. The 1997 estimates were used in this analysis to provide a consistent basis for comparison.

As shown, enplanements at the six comparative and the two Arizona airports that fall within the large community classification vary considerably, from less than 20,000 (Santa Fe and Victoria) to nearly 500,000 (Harlingen). The average number of the enplanements for the six comparable markets is 106,290 with Harlingen and 29,529 without Harlingen. In terms

TABLE 5-2

Arizona Department of Transportation
Arizona Air Service Study

COMPARABLE MARKET DATA

City	Enplanements	Number of Carriers	Number of Hubs Served	Total # Weekly Scheduled Departures	Total # Weekly Scheduled Seats
Large Communities					
Flagstaff	47,058	1	1	46	1,576
Yuma	75,161	2	2	88	2,843
Roswell, NM	26,545	1	2	51	969
Santa Fe, NM	17,283	2	2	61	1,236
Harlingen, TX	490,095	3	3	136	13,845
Victoria, TX	19,666	1	1	34	998
Casper, WY	61,804	2	2	63	1,995
Cheyenne, WY	22,349	1	1	21	609
Intermediate Communities					
Sierra Vista	12,014	1	1	27	513
Lake Havasu City	11,879	1	1	21	399
Kingman (EAS)	3,500	1	1	20	380
Prescott (EAS)	8,728	1	1	46	874
Bullhead City	54,094	1	1	25	475
Carlsbad, NM	9,428	1	1	25	475
Alamogordo, NM (EAS)	2,989	1	1	24	456
Farmington, NM	71,154	2	3	120	2,280
Grand Junction, CO	139,267	4	3	147	4,827
Helena, MT	67,865	4	3	78	4,307
Grand Island, NE	16,388	1	1	57	1,083
Laramie, WY	10,050	1	1	19	361
Kearney, NE (EAS)	1,428	1	1	32	608
Small Communities					
Grand Canyon 2/	632,971	6	0	129	2,051
Show Low	1,350	1	1	14	112
Page (EAS)	28,528	1	2	33	627
Safford 1/	-	-	-	-	-
Sedona 1/	-	-	-	-	-
Winslow 1/	-	-	-	-	-
Cortez, CO (EAS)	9,363	1	1	25	475
Alamosa, CO	4,618	1	1	19	361
Montrose, CO	44,526	2	2	59	1,777
Miles City, MT (EAS)	929	1	1	24	384
Havre, MT (EAS)	1,392	1	1	12	192
Alliance, NE (EAS)	388	1	1	38	722
Cody, WY	25,620	2	2	28	826
Riverton, WY	14,338	1	1	40	760

Note: 1/ Potential Market
2/ Service provided to the Grand Canyon National Airport is provided exclusively by charter carriers. The service that they provide in terms of the number of daily flights and seats varies between seasons. The information in this table reflects the service provided in what was determined to be an "average" month.

Sources: BACK Information Services, OAG Databases
Wilbur Smith Associates, Inc.
The Airport Technology and Planning Group, Inc.

of enplanements, it appears that Yuma and Flagstaff's enplanements are above average for most markets with similar population levels.

The number of carriers serving a market is important to examine because it affects a market's ability to attract passengers. Of the six comparable large airport markets, Harlingen is served by the highest number of carriers (five), while three markets are served by two carriers and two of the comparable airports are served by a single carrier. Currently, Yuma is served by two carriers, while Flagstaff has only a single carrier. It is important to note that if a carrier and its commuter affiliate (i.e. Delta and SkyWest) both provide service to the same airport, this service was recorded being attributable to two carriers. For markets with a similar level of population, the number of carriers serving Yuma and Flagstaff seem to be fairly comparable. It is important to note that West of the Mississippi, there are a fewer number of airline connecting hubs, as compared to the number located east of the Mississippi. As a result, smaller communities in the west have a more limited range of commercial air service opportunities.

The more limited number of connecting hubs west of the Mississippi also influences the number of nonstop destinations served from the markets. Typically, nonstop destinations from the smaller communities consist of service to the airline hub that the regional/commuter carrier is feeding. In some instances, however, the nonstop destinations are actually stops on the way from the spoke airport to the hub airport. An example of this would be the aircraft that serves Prescott that also stops in Kingman before continuing to Phoenix. From a record keeping standpoint, Prescott has non-stop service to both Kingman and Phoenix. Due to recording, the number of nonstop destinations may be deceiving and should be viewed in conjunction with the number of airlines serving the market.

Frequency, as measured by the total number of weekly scheduled departures, is a very important indicator of the level of service provided at an airport. Studies in the psychology of air travelers have shown that the total number of flights offered is one of the highest rated factors in a passenger's decision-making process when they select a departure airport. Frequency is related to the number of carriers providing service to the market; typically the higher the number of carriers providing service, the more departures offered. As shown in Table 5-2 for the comparative markets, Harlingen has the highest number of total weekly scheduled departures with 136, followed by Casper and Santa Fe at 63 and 61, respectively. With 88 scheduled weekly departures, Yuma ranks at the high end of the spectrum for markets served by two carriers. Although served by a single carrier, Flagstaff is also at the high end of the comparable markets with 46 scheduled weekly departures. The other two single carrier markets examined in the comparative analysis have only 34 and 21 scheduled weekly departures.

Similar to scheduled weekly departures, weekly scheduled seats provides another measure to evaluate commercial airline service to a community. Other than Harlingen, the remaining five comparable markets have a range of weekly scheduled seats between 600 and 2,000. Yuma's existing scheduled weekly seats far exceeds those of the other five comparable markets, while Flagstaff is second highest in terms of weekly scheduled seats.

It appears from the comparative market review that, besides Harlingen which provides a very high level of commercial airline service, the two large community markets in Arizona (Flagstaff and Yuma) have better than average commercial airline service, based on comparable market size.

2. Intermediate Communities

The five Arizona communities included under the heading "intermediate" communities were compared to eight other intermediate-sized communities to provide an overview of how scheduled commercial air service in Arizona ranked with communities similar in size. Of the five Arizona markets in this category, Bullhead City has the highest level of enplanements with over 54,000, while Kingman has only 3,500 enplanements. Of the eight comparable markets, Grand Junction experienced the highest level of enplanements (139,267), while Kearney had fewer than 1,500 enplanements. The average enplanement level for the five Arizona markets was 18,043, while the average for the eight comparable markets was double that level at 39,821.

In terms of the number of carriers providing service, all five of the Arizona intermediate sized communities were served by a single regional/commuter carrier. It is important to note that Bullhead City is also served by numerous charter carriers operating jet aircraft during the winter season; service provided by these carriers is not included as part of Table 5-1. Of the comparable intermediate markets, both Grand Junction and Helena are served by four carriers.

The majority of the comparable markets in the intermediate community grouping have service to more than one nonstop destination (or hub), as compared to the intermediate Arizona communities who primarily have service only to Phoenix. For the markets other than Grand Junction, Farmington, and Helena, the nonstop service provided consists more of linking the communities than actual nonstop service to additional hub destinations. For example, from Grand Island, nonstop service is provided to North Platte, Norfolk, McCook, Kearney, and Spencer (Iowa).

Scheduled weekly departures are also reflective of higher service levels and of service being provided by additional carriers in some of the intermediate markets. Of the five Arizona markets, Prescott offers the highest number of scheduled weekly departures, even though in reality, many of these departures are simply stops enroute to the hub or final spoke city.

Scheduled weekly seats in the five Arizona markets are comparable to each other, except for Prescott. Of the eight out-of-state markets, Grand Junction, Helena, and Farmington all provide a higher number of scheduled seats. Of all the airports in the intermediate airport comparison, only Grand Junction and Helena have service by aircraft other than the 19-seat Beech 1900s on a regular basis.

It appears that the five Arizona communities grouped under intermediate have a lower level of service, in general, than those markets reviewed as part of the comparable analysis. With fewer carriers, hubs served, departures, and seats, the five markets in Arizona rank below the majority of the eight comparable markets in terms of quality of service from the consumer's standpoint.

3. Small Communities

The Arizona communities grouped under small category consist of three airports who have service today and three who do not, but may have the potential to support service in the future. Obviously, no comparison can be drawn in terms of service for the markets that do not currently have service, but this analysis does provide data on the type of service that is provided to similarly-sized communities who are now served by a commercial carrier.

The majority of the eight small comparable markets are served by a single carrier, while two markets are served by two carriers. The small Arizona communities with scheduled air service are single carrier markets. In terms of the number of nonstop destinations served, the eight small comparable markets have nonstop service to anywhere from one to three markets. Of the small comparable markets, only two have service to more than one airline hub (Cody and Montrose). Page is reported as having service to three nonstop destinations, however, two of these destinations are related to a scheduled charter carrier that serves the Grand Canyon and the North Terminal Airport in Las Vegas.

The number of scheduled weekly departures varies widely from a high of 59 at Montrose to a low of 12 at Havre. Weekly scheduled seats varies along the same lines with Montrose having the highest number of seats at 1,777 and Havre with the lowest at 192 weekly scheduled seats. It is important to note that when the comparative analysis was completed, service at Show Low was provided with a "temporary" aircraft. Sunrise Airlines used a Piper Chieftain outfitted for eight seats to provide service from Show Low to Phoenix; a Beech King Air 200 has now been refurbished to serve the market. This aircraft has nine seats. The Grand Canyon National Park Airport has a wide variety of airline service, none of which falls into the "scheduled" category. All of this airport's existing enplanements are now flown on a number of charter carriers airport locations in Las Vegas; some only operate on a seasonal basis. Existing airline service to the Grand Canyon cannot be measured or compared to that experienced in markets with similar resident population levels.

It appears from the review of the markets in the small category that based solely on population, service could be possible to/from the three potential markets (Safford, Sedona, and Winslow). The level of service provided to communities of the size of the potential markets is generally single-carrier, is sometimes linked with another intermediate city as a stop on the way to the connecting hub, and is provided on a more limited frequency basis than service to larger communities. The actual viability of initiating new service to these markets will be discussed in a subsequent section. As noted in the previous chapter, if service were initiated to the three potential service points, the service areas for these airports would overlap in many instances with the service areas of Arizona airports that presently have airline service. Starting new service to these "potential" markets could impact the ability of existing markets to improve service. Arizona's ability to successfully support commercial airline service to additional service points will be determined later in this study.

4. SUMMARY

There is an inherent danger in comparing either the quantity or quality of air service between multiple cities, states, or regions simply because near-perfect analogies are the exception, rather than the rule. While two communities may share equivalent population levels, one might be rural and the other suburban such that each receives very different grades of air service. Certain unique demographic characteristics may also determine the manner in which two equally-sized cities are linked with commercial air service. For example, the seasonal travel requirements of a resort-oriented market frequently dictate quite a different array of air carrier schedules than does a university-oriented community or perhaps even a heavily industrialized area. Further, the topography of a particular region can determine the extent that alternative modes of transport compete with air service. Island and mountain communities, for example, often require an entirely different combination of service frequency and aircraft capacity than do those markets located in the heartland of the U.S. For these and many other reasons, communities need to be compared with great care. In its review of air service changes at 320 small communities between 1978 and 1995, the U.S. Department of Transportation (USDOT) acknowledged the difficulty in conducting large scale analogies:

> "Because of major differences at the 320 small communities reviewed (the certificated, non-hub communities) and the wide degree to which services in 1978 were improperly matched to the needs of individual communities, the changes that have occurred at individual communities have varied widely."

Further complicating matters is the appropriateness of the specific comparative measurements themselves. One of the most critical gauges of air service quality is the number of hub airports concurrently linked to a particular point. In regions of the country which are densely populated such as the Midwest and Northeast, there are a surfeit of competing facilities located within relatively close proximity. As previously discussed, west of the Mississippi River, the situation is exactly the opposite.

The air service opportunities, therefore, for many of the Arizona communities are more limited. With the continued focus on hub-and-spoke systems, it is likely that regional/commuter service will be the primary focus for service improvements at the communities included in this study. Regional/commuter carriers function as "feeders" to their major/national counterparts bringing passengers from spoke airports to connect to the major/national carriers at the hub. With the distances involved from Arizona communities to connecting hub airports in the West, the only alternative hub airports that present possible options include Salt Lake City, Denver, Los Angeles, and possibly Las Vegas. For airports that have sufficient demand to support regional jet aircraft, Dallas may also be considered as a potential hub to meet the air service needs of the State. Arizona's air service opportunities for the study airports are influenced not only by the size of the markets and their other characteristics, but also by the fact that the study airports are "within range" of a fairly limited number of airline connecting hubs. While technology in the regional/commuter airline industry is changing with the advent of the regional jet and larger turboprop aircraft that can fly longer stage lengths, the relative size of most of the study airport do not make them viable candidates for these new aircraft. The ability of Arizona's small and more rural markets to support air service improvements will be determined in subsequent analyses.

The next chapter of the Arizona Air Service Study develops estimates of unconstrained and potential air travel demand for each of the study airports. These estimates are then used in subsequent analysis to examine each airport's ability to support new or improved airline service. The information from the comparative analysis presented in this chapter provides one tool to identify which of the Arizona communities appear to be the most viable candidates for improved commercial airline service.